

Appl. No. 10/549,577
Amdt. dated August 23, 2007
Reply to Office action of June 20, 2007

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

Claims 1-11. (Canceled)

12. (Currently amended) An injection nozzle for an internal combustion engine, in particular in a motor vehicle, the nozzle comprising,

a first nozzle needle, which is embodied in the form of a hollow needle and is able to control an injection of fuel through at least one first injection opening,

a second nozzle needle, which is situated coaxial to the first nozzle needle and is able to control the injection of fuel through the at least one second injection opening,

a control chamber,

a first control piston and a second control piston,

wherein the -a- second control piston -that- axially cooperates with the second nozzle needle or a second needle unit that includes the second nozzle needle,

an end surface of the second control piston oriented away from the injection openings being situated in the control chamber, thus permitting it to be acted on with the control pressure prevailing therein,

the second control piston resting axially against the second nozzle needle or second needle unit in a closed position of the second nozzle needle

the -a- first control piston being embodied in the form of a hollow piston and cooperating axially with the first nozzle needle or a first needle unit containing the first nozzle needle,

the second control piston is situated coaxial to the first control piston,
a first control surface of the first control piston oriented away from the injection openings situated in the control chamber, thus permitting the control surface to be acted on with the control pressure prevailing therein,

an axial play between the first control piston and the first nozzle needle or first needle unit, in a closed position of the first nozzle needle

a throttle line providing communication between the control chamber and a pressure chamber, and

means for adjusting the ~~injection~~ pressure in the pressure chamber.

13. **(Previously presented)** The injection nozzle according to claim 12, further comprising a first closing spring, which on the one hand, drives the first nozzle needle or first needle unit in the closing direction and on the other hand, directly or indirectly drives the first control piston into an initial position in which the axial play is present between the first control piston and the first nozzle needle or first needle unit.

14. **(Previously presented)** The injection nozzle according to claim 13, wherein the first closing spring rests against the first control piston by means of a drive ring, and the drive ring comes into axial contact with a stop when it reaches the initial position of the first control piston.

15. **(Previously presented)** The injection nozzle according to claim 14, wherein the stop is embodied on a stop sleeve situated coaxial to the first control piston and resting axially against a nozzle body of the injection nozzle.

16. **(Previously presented)** The injection nozzle according to claim 12, wherein the first control piston constitutes a first stroke stop for the first nozzle needle or first needle unit so that in an open position of the first nozzle needle, the first control piston comes into direct axial contact with the first nozzle needle or first needle unit.

17. **(Previously presented)** The injection nozzle according to claim 13, wherein the first control piston constitutes a first stroke stop for the first nozzle needle or first needle unit so that in an open position of the first nozzle needle, the first control piston comes into direct axial contact with the first nozzle needle or first needle unit.

18. **(Previously presented)** The injection nozzle according to claim 12, wherein the first control piston has a second stroke stop for the second nozzle needle or second needle unit so that in an open position of the second nozzle needle, the first control piston comes into direct axial contact with the second nozzle needle or second needle unit.

19. **(Previously presented)** The injection nozzle according to claim 13, wherein the first control piston has a second stroke stop for the second nozzle needle or second needle unit so that in an open position of the second nozzle needle, the first control piston comes into direct axial contact with the second nozzle needle or second needle unit.

20. **(Previously presented)** The injection nozzle according to claim 14, wherein the first control piston has a second stroke stop for the second nozzle needle or second needle unit so that in an open position of the second nozzle needle, the first control piston comes into direct axial contact with the second nozzle needle or second needle unit.

21. **(Previously presented)** The injection nozzle according to claim 15, wherein the first control piston has a second stroke stop for the second nozzle needle or second needle unit so that in an open position of the second nozzle needle, the first control piston comes into direct axial contact with the second nozzle needle or second needle unit.

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22. **(Previously presented)** The injection nozzle according to claim 16, wherein the first control piston has a second stroke stop for the second nozzle needle or second needle unit so that in an open position of the second nozzle needle, the first control piston comes into direct axial contact with the second nozzle needle or second needle unit.
23. **(Previously presented)** The injection nozzle according to claim 12, further comprising a second stroke stop for the second nozzle needle embodied directly on the first nozzle needle or on a washer of the first needle unit.
24. **(Previously presented)** The injection nozzle according to claim 13, further comprising a second stroke stop for the second nozzle needle embodied directly on the first nozzle needle or on a washer of the first needle unit.
25. **(Previously presented)** The injection nozzle according to claim 14, further comprising a second stroke stop for the second nozzle needle embodied directly on the first nozzle needle or on a washer of the first needle unit.
26. **(Previously presented)** The injection nozzle according to claim 15, further comprising a second stroke stop for the second nozzle needle embodied directly on the first nozzle needle or on a washer of the first needle unit.

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27. **(Previously presented)** The injection nozzle according to claim 16, further comprising a second stroke stop for the second nozzle needle embodied directly on the first nozzle needle or on a washer of the first needle unit.
28. **(Previously presented)** The injection nozzle according to claim 12, further comprising a second closing spring axially resting directly or indirectly against the second control piston and, by means of the second control piston, driving the second nozzle needle or second needle unit in the closing direction.
29. **(Previously presented)** The injection nozzle according to claim 28, wherein the second closing spring is situated in the control chamber.
30. **(Previously presented)** The injection nozzle according to claim 18, wherein that the second closing spring rests against a spring plate that rests axially against the second control piston, is able to move in the control chamber in the axial direction, and enables a pressure compensation between its two axial sides oriented away from each other.
31. **(Previously presented)** The injection nozzle according to claim 30, wherein the spring plate is supported in the control chamber in an axially movable fashion and has at least one pressure compensation opening that connects the axial sides of the spring plate so that they are able to communicate with each other.